

Remarks

The Office Action dated March 16, 2007 has been carefully reviewed and the foregoing amendment has been made in consequence thereof.

Claims 5-19 and 25-28 are pending in this application. Claims 5-8, 13-16, 27 and 28 were withdrawn from consideration by the examiner. Claims 9-12, 17-19, 25 and 26 stand rejected.

The objection to the drawings under 37 CFR 1.83(a) are respectfully traversed.

A replacement sheet of drawings containing amended Figure 2 is submitted herewith for approval. Particularly, amended Figure 2 shows a layer of refractory material 85.

For the reasons set forth above, Applicants respectfully request that the objection to the drawings be withdrawn.

Applicants disagree with the assertion, at pages 3-4 of the Office Action, that Figure 2 does not include an inlet passage (Claims 5 and 6) and an outlet passage (Claims 7 and 8). Applicants submit that Figure 2 clearly shows inlet passage 110 positioned to discharge water from the suppression pool into said sump proximate the flow inlet side of the flow baffle and which is substantially parallel to the floor of the drywell as recited in Claims 5 and 6. Further Applicants submit that Figure 2 clearly shows outlet passage 112 positioned above the flow outlet side of the flow baffle and which extends upwardly from the sump to the suppression pool as recited in Claims 7 and 8. Accordingly, Applicants submit that Claims 5-8 read on the elected species shown in Figure 2. Therefore, Applicants submit that Claims 5-8 should not be withdrawn from consideration.

The rejection of Claims 9, 10-12, 17, 18, 19, 25 and 26 under 35 U.S.C. § 102(b) as being anticipated by Wistuba et al. (US 5,659,589) is respectfully traversed.

Wistuba et al. describe a device for collecting reactor-meltdown products from a reactor pressure vessel that includes an expansion chamber that is positioned laterally from the reactor pressure vessel (see Figure 1) for receiving the reactor-meltdown products and a coolant, such as cooling water, for cooling the reactor meltdown products. The expansion chamber includes a cooling system (see Figure 2) that includes a number of lengthwise channels 28 and a number of crosswise channels 30. A metal plate 34 covers the channels and support strips 36 support the metal plate.

Independent Claim 9 of the present application recites in part "An assembly comprising: a containment vessel comprising a suppression pool, a drywell and a floor, said drywell comprising a sidewall extending from said floor, said sidewall separating said suppression pool from said drywell; a reactor pressure vessel installed inside said containment vessel; a base grid disposed directly below said pressure vessel and spaced vertically above said floor of said containment vessel to define a sump therebetween, said base grid comprising a top plate; a layer of refractory material disposed on top of said top plate; an annular base grid shield wall extending vertically upward from said base grid, said base grid shield wall having a configuration comprising at least one of: (a) said base grid shield wall spaced inwardly from said drywell sidewall to define an annular channel therebetween; and (b) said base grid shield wall positioned adjacent said drywell sidewall; at least one flow baffle in said sump . . .".

Wistuba et al. do not describe nor suggest an assembly as recited in Claim 9. Particularly, Wistuba et al. do not describe nor suggest an assembly that includes a base grid

disposed directly below the pressure vessel and spaced vertically above the floor of the containment vessel to define a sump therebetween, and at least one flow baffle located in the sump. Rather, Wistuba et al. describe an expansion chamber that is positioned laterally from the reactor pressure vessel and that includes a cooling system having a number of lengthwise and crosswise channels. A metal plate covers the channels and support strips support the metal plate. The Wistuba et al. cooling system that includes a metal cover plate is not located directly below the pressure vessel (see Figure 1). Claim 9 of the present application recites that the base grid is located directly below the pressure vessel. Furthermore, Wistuba et al. describe in Col. 6, lines 21-24, that "[i]n the present case what is important is that the expansion chamber 12 be *disposed laterally and some distance from the reactor pressure vessel 4* and be kept dry in normal operation" (emphasis added). Accordingly, Applicants respectfully submit that Claim 9 is patentable over Wistuba et al.

Claims 5-8 and 10-12 depend from independent Claim 9. When the recitations of dependent Claims 5-8 and 10-12 are considered in combination with the recitations of Claim 9, Applicants respectfully submit that Claims 5-8 and 10-12 likewise are patentable over Wistuba et al.

Independent Claim 17 recites in part " A nuclear reactor comprising: . . . a core catcher cooling system located in said primary containment and disposed directly below said reactor pressure vessel, said core catcher cooling system comprising: a base grid having a top plate and a bottom plate, said base grid disposed directly below said reactor pressure vessel and spaced vertically above said floor of said containment vessel to define a sump therebetween; a layer of refractory material disposed on top of said top plate; . . . at least one flow baffle in said sump."

Wistuba et al do not describe nor suggest a nuclear reactor as recited in Claim 17.

Particularly, Wistuba et al. do not describe nor suggest a core catcher cooling system located in the primary containment and disposed directly below the reactor pressure vessel, with the core catcher cooling system including a base grid disposed directly below the pressure vessel and spaced vertically above the floor of the containment vessel to define a sump therebetween, and at least one flow baffle located in the sump. Rather, Wistuba et al. describe an expansion chamber that is positioned laterally from the reactor pressure vessel and that includes a cooling system having a number of lengthwise and crosswise channels. A metal plate covers the channels and support strips support the metal plate. The Wistuba et al. cooling system that includes a metal cover plate is not located directly below the pressure vessel (see Figure 1). Claim 9 of the present application recites that the base grid is located directly below the pressure vessel.

Furthermore, Wistuba et al. describe in Col. 6, lines 21-24, that "[i]n the present case what is important is that the expansion chamber 12 be *disposed laterally and some distance from the reactor pressure vessel 4* and be kept dry in normal operation" (emphasis added). Accordingly, Applicants respectfully submit that Claim 9 is patentable over Wistuba et al.

Claims 18-19, 25 and 26 depend from independent Claim 17. When the recitations of dependent Claims 18-19, 25 and 26 are considered in combination with the recitations of Claim 17, Applicants respectfully submit that Claims 18-19, 25 and 26 likewise are patentable over Wistuba et al.

For the reasons set forth above, Applicants respectfully request that the Section 102(b) rejection of Claims 9-12, 17-19, 25 and 26 be withdrawn.

In view of the foregoing amendments and remarks, all the claims now active in this application are believed to be in condition for allowance. Favorable action is respectfully solicited.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Michael Tersillo", written over a horizontal line.

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